Abstract ID : 818

Title : SEASONAL DISTRIBUTION OF STELLER SEA LIONS (EUMETOPIAS JUBATUS) IN RELATION TO HIGH-QUALITY EPHEMERAL PREY SPECIES IN SOUTHEASTERN ALASKA

Category : Ecology

Student : M.A./M.S.

Preferred Format : Oral Presentation

Abstract : Energy-rich forage fish that are densely aggregated during spring may be particularly important to Steller sea lions (Eumetopias jubatus). Energetic demands are high for sea lions during spring when females are pregnant and lactating and males are preparing for extended fasting during the breeding season. Therefore, we predicted that the distribution of sea lions in spring would be influenced by the distribution of spring-spawning aggregations of Pacific herring (Clupea pallasii) and eulachon (Thaleichthys pacificus) in southeastern Alaska. Monthly aerial surveys at 23 Steller sea lions haulouts revealed that haulout use was seasonally dynamic. Some sea lion haulouts were only occupied during spring and were located 6.0 ± 2.6 km from eulachon spawning sites. Other haulout sites were occupied for most of the year but with pronounced increases in the number of sea lions during certain seasons. Haulouts with peak numbers of sea lions in spring were significantly closer to forage fish aggregations than haulouts with peak numbers of sea lions at other times of year. During 2002 and 2003 from March until May, we conducted aerial surveys to monitor the numbers of Steller sea lions in the water at spring spawning aggregations of Pacific herring and eulachon. The maximal number of sea lions observed at eulachon spawning sites was 949 in 2002 and 297 in 2003. The maximal number of sea lions observed at herring spawning sites was 288 in 2002 and 346 in 2003. Seasonally aggregated, high-energy prey species influence the seasonal distribution of sea lions. Ultimately, spring pulses of high-energy food resources may be critical to the reproductive success of individual Steller sea lions.